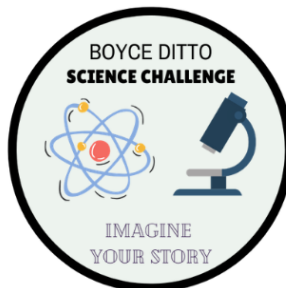
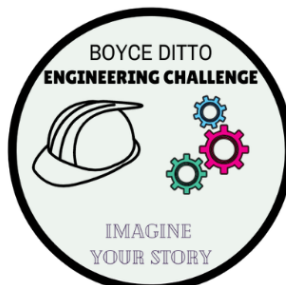




Badges



**Boyce Ditto
Summer Learning
2020**

Boyce Ditto

Summer Learning 2020

Instructions for Badges

For the Art, Engineering, Technology, Writing, and Science Challenge badges:

Complete 9 out of the 12 activities listed on the badge page to earn the badge.

Have an adult initial each of the square that you complete. When you have 9 completed, turn in to the library to receive your badge!

For the Book Report, Scavenger Hunt, Drawing, Story, and Mythical Being badges:

Complete the activity included in your packet and turn in to receive your badge.

For the Happily Ever After Badge:

You will receive this badge for completing and turning in your reading log.

Upon completing and turning in all badges (not including the Happily Ever After Badge), you will receive an extra entry into the grand prize drawing.

Must be turned in by July 24th.

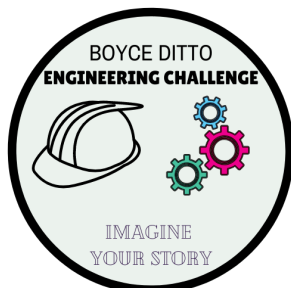
Please always check with an adult before starting any of these badges or activities.

We'd love to see how your activities are going! Post a picture to Facebook (@Boyce Ditto Public Library) or Instagram (@boyceditto) and tag us, or join our private Facebook group (Boyce Ditto Library Summer Learning 2020 Imagine Your Story) to share your pictures!

Engineering Challenge Badge

Summer Learning 2020

<p>Make a cardboard watch.</p> <ul style="list-style-type: none"> • Think about color and design • Decorate it however you like 	<p>Build a catapult with popsicle sticks.</p>	<p>Design a new fidget toy.</p> <ul style="list-style-type: none"> • Draw a picture of it • Describe how it works
<p>Make something out of newspaper.</p>	<p>Design and make a house for one of your toys.</p>	<p>Make and decorate 2 paper planes.</p> <ul style="list-style-type: none"> • Which plane flies farther? Why?
<p>Build a tower taller than yourself.</p>	<p>Make paper building blocks. *</p>	<p>Make a musical instrument from recyclables.</p>
<p>Construct a blanket fort.</p>	<p>Make a marble run.</p> <ul style="list-style-type: none"> • Consider using Lego, paper plates, or recycled cardboard. 	<p>Create a maze out of household items.</p>



Complete 9 squares to earn this badge.

Paper Building Blocks

Age Appropriateness: 6+, Adult help with cutting if necessary

Materials:

Thick colored paper

Scissors

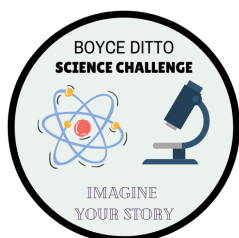
Tape

Instructions:

1. Measure paper into 1x 3 inch rectangles and cut out.
2. Cut some paper "planks," 1-inch strips of paper that are not scored. They can be 3 to 6 inches long.
3. Fold your 1-inch strips into triangles.
4. Tape the open edges together to form a triangle.

Science Challenge Badge

<p>Make invisible ink and write a secret message.</p> <ul style="list-style-type: none"> Try using lemon juice 	<p>Make a spot of green marker on a paper towel 2 inches from one end of a paper towel. Hang the strip in a jar of water so the spot is just above the water. Let stand for 15 minutes. What color is the paper now? Why?</p>	<p>See like a chameleon.</p> <ol style="list-style-type: none"> Cut out two egg holders from a carton Use a pen to make off center hole in each one Hold the egg holders over your eyes. You can now see in two directions!
<p>Place a piece of cardboard over a drink glass filled to the brim with water. Make sure no air bubbles enter the glass as you hold the cardboard against it. Then turn the glass upside down over a sink. Take away the hand holding the cardboard. What happened? Why?</p>	<p>To Many Straws:</p> <ol style="list-style-type: none"> Fill a glass with water about 3/4 full. Place one straw inside the glass. Hold the other straw outside the glass. Place both straws in your mouth and try and take a drink. Are you able to? 	<p>Straw Wheels:</p> <p>Place a book on the table and try to push it. Then place the straws on the table and put the book on top of the straws and push the book. What happened? Why?</p>
<p>Make rock candy.</p> <p>*</p>	<p>Go outside and find an interesting looking leaf.</p> <ul style="list-style-type: none"> Sketch a copy of it. 	<p>Make your own seed spinner.</p> <p>*</p>
<p>Bouncing Egg:</p> <ol style="list-style-type: none"> Place egg in a clean glass jar. Pour over enough vinegar to cover egg. Place lid on jar, and leave it on the counter for three days. On third day open the jar and pull out the egg. Does it still have a hard shell? 	<p>Take your Fingerprints:</p> <ol style="list-style-type: none"> Rub a pencil on a sheet of paper to make a thick mark that's larger than your finger. Rub your finger on your forehead and press it to the mark. Press your fingertip on to the sticky side of a piece of tape. Stick tape to a piece of paper and examine. 	<p>Test your coordination:</p> <ol style="list-style-type: none"> Sit on a chair and cross your legs Lift your right leg and rotate your right foot in a clockwise direction. (do left, if left-handed) Now try to write the number 6 at the same time.



Complete 9 squares to earn this badge.

* Create how ever you would like. There are some instructions on the back if your stuck!

Seed Spinner:

1. Draw a straight line across the paper, around 1 1/4 inch from the bottom
2. Cut out the strip and find the center of it. Make a pencil mark 1 1/4 inch to the left of this. Draw a line from the bottom to the top of the strip, stopping half way
3. Make a pencil mark 1 1/4 inch to the right of the center. This time, draw a line from the top to the bottom of the strip, stopping half way
4. Cut along the lines
5. Bend and twist the strip, to push the cut paper together. You have created the two wings of your spinner.
6. Stick a small ball of modeling clay or playdoh at the base of the loop. This is the 'seed'.
7. Go outside and ask an adult to help you find a safe place to drop the seed from. Watch it spin as it falls to the floor.

Rock Candy:

Ingredients

- 2 cups water
- 4 cups granulated sugar + extra for dredging sticks
- food coloring
- natural flavoring (optional: raspberry, cherry, cinnamon, lemon, orange, peppermint)
- Equipment
- small saucepan
- wooden spoon
- wooden skewers / swizzle sticks / string & pencil
- clothespins
- 4 – 6 clean, narrow glasses (Champagne flutes are ideal, but any glass with a narrow opening that a clothespin can rest on will work.)

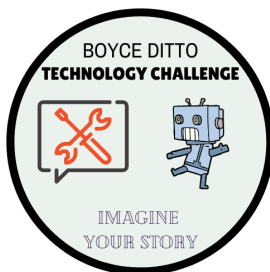
Preparation

1. Bring the water to a boil over medium-high heat. Slowly, add the sugar one half-cup at a time, stirring until it's completely dissolved and the solution comes to a rolling boil. Remove from heat and cool for 20 minutes.
2. Dip the wooden skewers, swizzle sticks, or string into the sugar solution, then dredge them in the extra granulated sugar, rolling them so that they're completely covered. Set them aside until dry, 5-10 minutes. (If you use string, you will need to straighten it out before laying it flat to dry on parchment paper.)
3. Prepare the glasses: pour 5 – 6 drops of your desired food coloring into the bottom of each glass. If you're using a natural flavoring extract, add a few drops at this time. Pour the cooled sugar solution over the food coloring, about three-quarters of the way up the glass. Stir to combine.
4. Place the dried skewers or swizzle sticks into the center of each glass. Clip the top of each stick with a clothespin to keep it in the center of each glass and so that the tip isn't touching the bottom of the glass (or else it will be difficult to remove.) If using string, tie the opposite end that's not coated in sugar around a pencil, and place the string in the center of the glass. The pencil should be laid over the rim of the glass with the string hanging down.
5. Place the glasses in an area where they will not be disturbed, and let them sit for 1 – 2 weeks, or until the sugar crystals

Technology Challenge Badge

Summer Learning 2020

<p>Design a robot.</p> <ul style="list-style-type: none">• Draw it or make it out of recycled materials.• Give it a name.	<p>Make a map of a fairy tale land.</p>	<p>Make up your own secret code and write a letter to a friend.</p>
<p>Make flashlight or marshmallow constellations.</p> <p>*</p>	<p>Design a time machine.</p> <ul style="list-style-type: none">• Draw a picture of it.• Describe how it works.	<p>Make a 'phone' using paper cups and string.</p>
<p>Write out your name in binary. If able, you can make it into a bracelet using bread.</p>	<p>Make recycled paper.</p>	<p>Download and tryout a coding app.</p>
<p>Play if then coding game.</p> <p>*</p>	<p>Make a stop motion video.</p>	<p>Make a tornado in a jar.</p> <p>*</p>



Complete 9 squares to earn this badge.

Flashlight Constellations

Cut circles from cardstock paper that are the same size as your flashlight opening. Draw a dot with a permanent marker onto the paper circles to represent each star in the constellation. Label each constellation.

Punch a hole in each dot on the paper. A hole punch is preferable to a needle or nail because the paper can block the holes if it is not completely removed.

Open the flashlight and take out the silver reflector (if you can't take it out, paint it black with acrylic paint). This step is the most important. For some reason, if you leave the reflector in the flashlight the constellations will not show up unless the light is nearly touching the wall. We tried with an LED flashlight, and because we couldn't remove the reflector, the constellations were not as clear as they would have been otherwise.

Close the flashlight back up and place a constellation circle over the flashlight. Shine the flashlight onto the wall in a dark room to reveal your summer night sky! My kids had tons of fun playing with these flashlight constellations. They liked that they were able to play in the dark and see the night sky in the day.

Tornado in a Jar

Materials:

Jar

Water

Glitter

Soap

Directions:

1. Fill the jar mostly full of water. Drop no more than two drops of dish soap into the mixture.
2. Add a tiny sprinkle of glitter and close the lid.
3. Shake using a circular motion to reveal your tornado!

If then Coding Game

1. For every round, there is one Programmer and everyone else is a Computer. The Programmer stands in front of the Computers and gives them his command. If I ____ (fill in the blank), then you ____ (fill in the blank). For example, the Programmer below gave the command "If I turn in a circle, Then you turn in a circle."

Art Challenge Badge

Summer Learning 2020

<p>Draw or paint a still life picture of one of your toys</p> <ul style="list-style-type: none"> Place the toy in front of you and draw what you can see. Color the picture 	<p>Make a mask. Be as creative as you like.</p>	<p>Write your name in fancy lettering. Be as creative as you like.</p>
<p>Make a pop– up card.</p> <p>*</p>	<p>Draw a fairy tale creature and give it a name.</p>	<p>Draw a portrait of somebody in your family.</p>
<p>Draw a picture of your favorite animal.</p>	<p>Make your favorite food from a recyclable item.</p>	<p>Draw a picture with your eyes shut.</p>
<p>Make a magic wand</p> <p>*</p>	<p>Design and make a photo frame</p> <ul style="list-style-type: none"> Use whatever materials you would like (example cardboard or popsicle stick) 	<p>Make a silly hat.</p>



Complete 9 squares to earn this badge.

- Create how ever you would like. There are some instructions on the back if you're stuck!

Pop Up Card Instructions

Materials

2 pieces of cardstock or construction paper

Scissors

Glue stick

Art supplies to decorate

Directions

1. Fold a piece of construction paper or cardstock in half. If you'd like to make a smaller card, cut the paper to size before you fold.
2. Cut slits at the center of your card. With the folded side facing you, cut two 1.5 inch slits. The paper between each of the cuts will form a tab that you'll secure your pop up art to. Tabs can be wide or narrow depending on what kind of art you choose. Make multiple tabs if you are planning to add pop up art along the width of your card.
3. Open the card and fold tabs inward. Crease each tab at the center. They should now be on the inside of the card.
4. Print or draw your pop up art. Choose what will go on each tab—you can either print the images we provided or draw your own. Cut the pop up art out and use a glue stick to secure to each tab.
5. Fold your second piece of paper in half. This will be the outside of your final card. Glue the outside of the first piece of paper. Place the first piece of paper inside of the second piece of paper and press together, hiding the tab cutouts.
6. Decorate your pop up card and write a message. Put the finishing touches on your pop up card with glitter, stamps, or a fun message.

How to Make Easy Harry Potter Wands

Materials:

- A stick or other similar object, e.g. chopstick, old pencil
- Wool / String
- Glue
- Paint
- Decorations, e.g. glitter, jewels, beads

Directions:

1. Gather some sticks. Head into the garden or out to a park and look for some great wand sticks. The main thing to look for is sticks that are nice and straight and not too thin. Another option for a super easy wand is to use an old chopstick.
2. Put some glue (e.g. school glue / PVA glue) in a bowl. Add a length of wool or string and coat it in the glue. Then begin wrapping the string around your stick in whatever way you like. If you find this way too messy, you can always simply paint some glue onto the stick, add the dry wool or string, then paint more glue on the top to hold it in place.

Writing Challenge Badge

Write out a joke. Illustrate it if you want!	Make a card or write a letter to somebody that you care about.	Write a script for a puppet show.
Write and illustrate a comic strip.	Write out a poem. Illustrate it if you want!	Go on a letter hunt. Choose a letter and write down as many thing as you can find beginning with that letter.
Imagine you're opening your own restaurant. Create a menu.	You've just landed on an unknown planet. Write a story about it.	Write out what advice that you would give a new student at your school.
Finish the story: After hearing some strange sounds under my bed, I peeked underneath and there I found a dragon. He seemed pretty friendly...	Write a recipe for your favorite food item.	Describe your favorite place as if the person your were describing it to was blind. Think about touch, smell, sound, and taste.



Complete 9 squares to earn this badge.